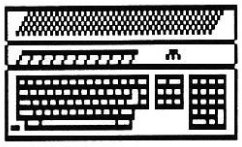
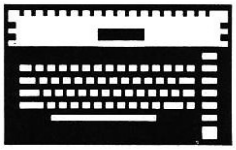
XIO3



July/Aug. 1993



A Newsletter produced by the Garden City Atari Computer Enthusiasts, 1003 Amphion St, Victoria, B.C. CANADA V8S 4G2

Editor's Mumblings...

Well, we had so much material, we made this issue of XIO3 14 pages!! There has been a decision made by the Executive that if there is sufficient material, then the editor (that's me) has authorization to add the required pages to publish the material. This was decided because we felt that if a person wants to contribute an article, it should be in the next newsletter, and not to be held onto until we could fit it into the 10 page limit that was previously set. Please keep in mind though that this can go the other way. One month we could have less than five pages, in which case the newsletter would be smaller.

So here comes my pitch. I would like to call on the rest of the membership to write some articles because as it stands right now, members of the executive have been the only contributors to this issue of the newsletter, and for at least 3-4 issues previously published. You can write about any Atari related issue you desire (ie: game or application reviews, new product reviews, programming topics, etc.). You can even place FOR $ALE ads in the newsletter. And all of this is free!!!!

Anyways, have a great summer and as Porky Pig says, "Bedeep, Bedeep, That's all folks!!!

Chris Sherwood
Editor, XIO3

Meeting Topics

JULY - Archivers
AUGUST - Telecommunications
SEPTEMBER - Sound and Music

G.C.A.C.E. EXECUTIVE

President: Gordon Hooper
Vice President: John Picken
Secretary: Rowland Grant
Treasurer: John Towler
Editor: Chris Sherwood
ST librarian: Ted Skrecky
8-bit Librarian: George Rose
BBS Sysop: Bob Nex
Director: Mark Ericson
Director: Steven Lemmen
Director: Ron DePol

CREDITS

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MEMBERSHIP

Membership dues are $25.00 per year for family memberships. Membership includes a subscription to the club newlsetter, XIO3, access to over 300 8-bit and 100+ ST disks, and if you are into telecommunications, increased time and upload/download ratio on the official club BBS, the Pothole BBS, (604) 642-6795, 3-2400 bps, 24 hours, 7 days.

MEETINGS

Meetings are held on the third Thursday of each month except December at the Saanich/Victoria Branch of the Victoria Public Library. Meetings start at 7 pm and usually run until about 9 pm. Copying of club disks, both 8-bit and ST usually takes place at meetings, unless the librarians cannot make it with their machines.

ADVERTISING IN XIO3

Members can place classified ads (ie: Buy, Sell, Swap) for computer related products free of charge.

Commercial advertisments must be submitted as camera-ready artwork and be pre-sized. Please mail the artwork along with payment in full to Garden City A.C.E. care of the editor. Newsletters are published in January, March, May, July, September and November. The deadline for submissions is the 10th of the month in which the newsletter is being published.

The rates for commercial ads are as follows: Full page - $15.00. Half Page - $8.00, Quarter Page - $5.00, Business Card - $3.00. Please call the Editor for additional information.

Peeking Around

by Gordon Hooper

Welcome to new member Jordan Haythornthwaite from Duncan. He is the first member of our club with a new Falcon ... CRAIG CARMICHAEL showed up at our June 17th general meeting with a new Falcon computer to demonstrate ... ROWLAND GRANT was host to the July executive meeting, which was underwhelmingly attended because it fell on Canada Day and the president was too stupid to reschedule it ... Here's a warning to all you modem maniacs. TED SKRECKY (CyberLord) is now a co-sysop of the Pothole. I made mention of this on the board, and the CyberSucker threatened to nuke me off the board. Try to keep him happy and don't make fun of his pseudo; he gets downright nasty ... Speaking of the Pothole, things must be getting exciting in East Sooke. BOB NEX hasn't been seen in the big city for months now. I bet the sheep are contented ... Things are also exciting in Langford. MARK ERICKSON and his wife Kathy had a baby girl, Robyn Kelly, a sister for Drew. Congratulations, Mark and Kathy ... MORGAN STEWART now has a 14,400 bits per second modem running his BBS, Capoeira Circle. Give it a try at 598-9953. I bought his old 2400 baud modem, so I can now talk at you twice as fast as when I was at 1200 baud ... DARYL TAYLOR had a mental lapse and bought an IBM clone, but still remains in touch with us on the Pothole ... JOHN PICKEN of the semi-official Garden City Atari 8-bit User and Drinking Society will have a large amount of kittens ready for adoption next month. Guess he neglected to tell his cat about safe sex. Of course, being ex-Navy, he probably doesn't know about it himself ... Rush any news of G.C.A.C.E. members indiscretions to GORD at 386-0857 ...

THE Best Computer

by Douglas Skrecky

What's better -a 486 powerhouse with 8 megs ram, a 100 meg hard disk, super VGA monitor and a laser printer or an Atari 800XL with a Panasonic 1080 dot matrix printer? Before a tidal wave of laughter erupts, perhaps we should weigh the merits of these two choices objectively just in case the obvious winner should prove to be have feet of clay.

What can an Atari 800XL do? Well, you and a friend could play Angleworms with it, which just happens to be the best public domain two player game ever invented.

What can a 486 do? If you were an accountant you could play dbase IV, which I hear is lots of fun for these people, but unfortunately not for anyone else. The Atari can run an excellent PD shoot-em-up called Gauntlet. The 486 can help you to balance your checkbook, which is real easy seeing that it would be empty if you bought one. The Atari can help you rattle off a letter to a friend. The 486 can help you go broke running your very own desktop publishing business, provided you can master the 500 page manual first.

Perhaps all this is a rather unfair comparison because of the large price difference between the two choices. A more fair contest would be between packages of equal value. Throw in a used Ford Festiva with the 486 and compare to an Atari packaged with an expensive sports car that the babes are.....partial to.

And the winner in this contest is....I have just been handed the envelope and am now opening it up....The winner is Atari, just as we expected all long. No surprises.

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Atari News & Rumors

by Rowland Grant

The Atari Falcon computer has finally turned up on our misty island. Yes, Chris Sherwood reported actually seeing one at Micro-Vision Computers in Nanaimo. Chris brought back several copies of the Falcon030 promotional brochure as evidence. This brochure is attractive, colourful and well designed. It is by far the best piece of promotional literature that Atari has put out in a decade. The brochure describes the Falcon computer as being a Personal Integrated Media System (PIMS). The report of Chris's sighting was upstaged at our June meeting by Craig Carmichael, a registered Atari developer. Craig showed us his Falcon030 that he had received from Atari just three days previously. So it's real, and as far as we could test it, the Falcon030 lives up to the claims in the brochure. The demo model of the Falcon at Micro-Vision had a 65MB hard drive. However, Craig's Falcon came with 84MB. Apparently 80MB or more will be standard in the future. In Victoria, Ward Music has arranged to continue its Atari dealership, and hopes to have some Falcons to sell in the near future. Ward Music in Vancouver now has a special store for electronic music and sound studio equipment. Atari Falcon computers should be popular among the music makers.

The Canadian price for a Falcon030 with 4MB RAM and 80MB hard drive is $1699. This is about the same price as the Macintosh LC III. A sound board is available for the Mac LC which gives it exactly the same sound specifications as the Falcon. But the sound board costs an additional $1200. And the (now $2900) Mac LC still doesn't have anything like the Falcon's video capabilities. The US list prices for the Falcon range from $814.98 (1MB, no hard drive) to $1936.98 (14MB and 80MB hard drive). The 4MB/80 model lists at $1324.98, but purchases have been reported as low as $1149. The models with hard drive are all supplied with MultiTOS, Atari Works, SpeedoGDOS and a number of other programs already installed on the drive. This software is also being packaged for separate sale for any ST users. The following are list prices in US funds: MultiTOS ($60), SpeedoGDOS ($65), Atari Works ($119). Atari Works includes SpeedoGDOS, so Atari is supplying almost $180 worth of software free with Falcon computers with hard drives. Atari intended to add other software: Falcon D2D, a stereo record playback program, and Systems Audio Manager. Unfortunately, these turned up with a few bugs, so release has been delayed.

There are persistent rumours of a more powerful model of the Falcon in the works. Also Atari in Britain has announced that the Falcon will be issued in a new case. On the other hand, Atari USA says that the current Falcon030 in the ST case is not a transitional model. Perhaps this is simply the low end of the Falcon line, which in time will replace the ST. The new case may be for the rumoured "mega Falcon" which will sport a faster 68040 microprocessor. Had the Falcon030 been ready last fall, the market might have been ready for the mega Falcon later this year. Now its release will depend on Falcon030 sales. In the meantime expansion boards for the Falcon030 are a possibility. There is a rumour that a Swiss firm has a 68040 expansion board ready now for the Falcon030. At the same time, there is a steady demand for the TT. While it may not be more powerful than the latest PC clones, the TT has proven to be much easier to set up and operate. This has made it a computer of choice for certain specialized tasks, such as controlling embroidery machines. To maintain these niche markets Atari has put the TT back in production. While Atari did develop a new TT case and circuit that met class B (home use) standards, this has not been put into production. The TT is seldom used as a home computer so it makes no economic sense to retool for the home use version.

Atari released its financial statement for the first quarter of 1993. Sales were down to $10.1 million compared to $44.1 million for the same period last year. This is not surprising since Atari had almost nothing to sell early this year. On the other hand, by staff reductions and drastic economies, the overhead had been reduced to $5.9 million from $16.1 million last year. And while Atari still suffered a loss, it was only about $2 million, compared to $13.8 million in the first quarter of last year. Now that Falcon computers are shipping in increasing numbers, the sales figure should start to look better. Perhaps Atari might even make a profit in 1993. Recently, Bob Brodie defended the Tramiel management and attempted to give some perspective to Atari's present predicament. He pointed out that four years ago the ST began to lose its power-price advantage. To counter this, new computer developments were being planned. However, around that time, most of the key engineering staff left Atari, apparently taking their new ideas with them (he didn't say why). Atari had to start development almost from scratch. Atari went ahead with the TT (which arrived years late). Other products such as STacy and ST Book did not sell well and have been discontinued. Expensive developments like STylus, turned out to have no market. Development of the Panther 16-bit game system took too long and was abandoned. With regard to the Falcon, Bob said that Atari is keeping production runs small until the economy picks up. He felt that Atari was not missing its "window of opportunity" in launching the Falcon slowly. He felt that it may be more than a year or two before others can match the Falcon's power-price ratio. In the meantime, Atari is building a dealer network. There are now 140 in 40 states in the US. Pacific Software Supply, one of the few wholesale sources of Atari software, will now act as a wholesale distributor for Falcon computers and accessories in North America. This second source should help a lot in getting stock out to dealers. We have no figures for Atari dealers Canada, but we know that there are a some. One store in Vancouver is now advertising Falcon computers. If the Falcons sell reasonably well, we might expect more dealers to carry Atari computers.

The slow launch may not expose the Falcon030 to much competition as yet, but it has made things difficult for software developers. The Falcon looks like it could succeed very well in the musicmarket, just

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as the ST did. One must remember, however, that the ST's success was not due just to the MIDI ports. It was also due to the excellent music system software, some of the best in the business, that was available for the ST. Some of these software producers have been dropping out of the Atari market anyway, but I understand (from comments in a recent issue of Computer Paper) that the Falcon debacle has lost more. In the professional music world, software determines the hardware. The power-price advantage won't sell the Falcon if the best software is not there. The computer part of a sound studio is one of the lesser expenses. So if the Mac had better software, the Mac system will be preferred even if it costs a thousand more than the Falcon. Codehead Software has reported that there has been scarcely a sale in months. I notice that Codehead is advertising a drastic reduction in the prices of some of its imported software. Codehead is not optimistic about the influence of the Falcon030 on sales. Most of the Falcon purchasers are Atari users who already have most of their software. After all, who else would know that the Falcon exists?

For mundane things like word processing, spread-sheet and database use, the PC clones now have the power without the price. Locally one can get a '386 system with 80MB hard drive and 2MB of RAM for under $700. In the face of this, Apple computer has cut its prices again. It expects to have increased sales and reduced profits. Apple has also gone out of its way to keep the loyalty of its third party software developers. Apple announced that no major technology will be introduced from Apple that won't be able to relate to other platforms (ie PC and Windows). It is hard to see how Atari can play in that market any longer. Apple has sold 10 million Macs and there are about 25 million PC's using Windows. Atari's installed base is about one million. If Atari can hold onto its niche in the music market and hold the loyalty of some of the current users, it will have accomplished more than one might reasonably expect. Atari has to do this without losing any more money too. Atari might succeed, but I expect that the market for Atari's proprietary computers will remain small.

And then there's the strange story about Atari shares. In February Atari shares dropped to a low of about fifty cents and remained a penny stock for some time. This prompted Robert Dytmire of Jacksonville NC to propose that Atari users take over Atari Corp by buying up all the outstanding shares, since at those prices it would take only a few dollars per user. The support of Time-Warner and Xerox, holders of large blocks of Atari shares, would be sought. Unfortunately for Dytmire's ambitions, the Tramiel family is thought to control more than half of the outstanding shares. Also Atari Corp has a policy of quietly buying up shares while the prices are low. This reduces the number of shares outstanding, and would increase the Tramiel's percentage. At any rate, after Dytmire's announcement, Atari's stock went up to over a dollar, but the trading was light. Then there was the rumour that the board of Atari Corp would propose a share consolidation of one for ten. This should increase the price tenfold (they hope), and reduce the number of shares in circulation. Atari has 57.8 million shares outstanding at present. At this point, investors began to look at Atari. They saw the new Falcon030 was starting to turn up in stores in the US, they saw small first quarter losses, and they heard about the new Atari super games machine, the Jaguar. While many players in the computer hardware business were bleeding hundreds of millions, here was Atari looking like it was beginning to turn around. Atari shares rose to three dollars in heavy trading on AMEX. At the same time Commodore was showing a $177.6 million loss on sales of $120.9 million. Commodore's sales in Germany suffered the most. It looks like Commodore will have to go the way of Atari and slash the size of its operations quite considerably. Commodore's stock dropped to three dollars.

Even locally, Commodore's fortunes have begun to decline. Two dealers in town who have sold Amiga software for years will be dropping Amiga products. There will be one Amiga dealer left in town. The Amiga has its enthusiasts and its niche markets too, so it may survive. The decline of Atari and Commodore is a pity. Looking at computer magazines such as Byte and Creative Computing ten years back, one sees quite a variety of computer "platforms". Atari and Commodore were major suppliers then, in a diverse and relatively small market. Most of the articles in those magazines were of general interest and there was an air of excitement that seems to be missing in most computer magazines today. Perhaps in those days, professional programmers were still working with mainframes, leaving microcomputers to the talented amateurs. Those amateurs seemed to be able to write understandable articles, relatively free of jargon, and most of all, their enthusiasm was infectious. Now that microcomputers are a major industry, even programming seems to be discussed from an industrial point of view, with its abstruse cross-platform object oriented languages. Still, I noticed a remark that the public domain listings on Compuserve are almost as numerous in the Atari ST base as in the PC base. Since there are about one hundred times as many PC users as ST users, that speaks well for our Atari amateurs, doesn't it.

Perhaps the main reason for the improved prices of Atari shares is the recent announcement of the imminent release of the Jaguar game machine. Called a multi-media entertainment system, the Jaguar will use a fast 64-bit RISC processor. It will deliver 24-bit true colour video with a choice of 16 million colours on a TV. It will be capable of 3-D image processing and real-time texture mapping (sounds good, whatever it is). The Jaguar will have a DSP audio system delivering 16-bit sound (CD quality). It comes with an expansion port (32-bit) that can be linked to cable or telephone. Also there is a DSP port for modems and digital audio players. There will be a compact disc peripheral and a controller using ten keys. The games and other software will come in cartridges. A number of games are said to be ready to publish now. The Jaguar's unit price is to be below $200. Atari intends to market the Jaguar in the New York area for the year-end holiday season. There will be national distribution within a year. At least that is what Atari says.

Since Atari would not show the Jaguar at the most recent CES show, there has been a charge that it's just vapour ware. However, it would seem that the custom chip set that runs the Jaguar (and designed in Britain) is in production now. Also, Atari has been meeting with software producers regarding

the Jaguar for some time. The software developer kits have been available for almost a year. A number of games are in various stages of completion, not counting the five that are ready now. There have been comments that the under $200 price is unrealistic. However, others in the know have pointed out that the Jaguar will contain only a few very large integrated circuit chips and three interfaces, so the manufacturing costs will be much lower than for a computer of the same power. In addition, the big profits are made on software sales. Apparently game machines are usually sold at little more than cost. While Atari may never get a significant part of the present computer market, the game machine market has room for a more advanced system. All the competing machines are proprietary designs. There is no universal game machine operating system (like DOS) and therefore no cut-rate game machine clones to compete with.

However, Trip Hawkins, founder of Electronic Arts is promoting a product that may result in a de facto standard. It is a system and a device for interactive video. It is called Three Dimensional Operating System Interactive Multiplayer, or 3DO for short. 3DO has a multitasking operating system. The hardware uses a 32-bit RISC processor, it can generate 16-bit sound and 16 million colour video. It has special 3D animation hardware that allows the smooth animation of relatively large images. The system uses a 650MB double speed CD ROM drive. It will sell for $700. While the 3DO system can be used as a game machine, it is designed to handle many other kinds of applications, such as interactive movies, realistic simulations, children's storybooks, reference library, on-line shopping etc. There are other systems that do some of this, but Hawkins maintains that 3DO provides superior audio and video quality. He believes that this should make 3DO more acceptable and widely used. 3DO is being marketed as a new entertainment appliance, like a VCR. Hawkins has lined up a coalition of MCA, Electronic Arts, AT&T, Matsushita, and Time Warner, to handle the various aspects of the 3DO system. Also over 80 publishers have been licensed to develop software, they include big names like Paramount and Warner Brothers. I notice that Atari's Jaguar has almost the same specifications as 3DO. On paper, the Jaguar seems to be a (possibly superior) version of the 3DO without the expensive CD ROM drive built in. In addition the Jaguar has a cartridge port. As a game machine it can get along quite well using cartridges. If 3DO takes off, the Jaguar could be seen as a much less expensive alternative. No wonder Atari's shares are going up.

While there's all this hoopla about the new. Atari is still supporting the older ST models, making its own software as downwardly compatible as possible. Bob Brodie pointed out recently that TOS2.05 was modified to the current version 2.06 so that the new TOS could run on the older ST machines. Other suppliers are also still adding new capacities to the ST. Lexicore is distributing the Nova system of video boards for the Mega models. You can get one board that gives the Mega ST/STe a TT video capacity, another emulates the Falcon and a third goes beyond the Falcon. Also there seems to be a ST memory expansion card that somehow bypasses the ST's memory manager and allows direct access to 14MB of RAM. In spite of slow sales, Codehead is still in business. It is now marketing MIDI SPY, a multi-tasking recording system for use with Roland Sound Canvas synthesizer. The ST market in North America is in a very fragile condition. Jim Allen ran Fast Technologies which manufactured the Tiny Turbo and Turbo 25 accelerator boards for the ST. It was always a hand to mouth business. Jim was forced to quit when several orders were cancelled, leaving him badly out of pocket. And the famous Dave Small hasn't been heard from for months. Even his articles in Current Notes deal with personal matters. The genius who created the Spectre Mac emulator for the ST and other computer goodies is showing all the signs of burnout.

The Atari 8-bit market has been fending for itself for years now. And there's still lots of life, especially in further out counties that don't have or can't afford all the latest. The XE/XL systems are still going strong in Hungary and Romania. In Poland, someone is manufacturing 8-bit drives (called the California 2000 and 2001). Some user in Chile claims that over 300,000 8-bit Atari's have been sold in his country. Software for 8-bit Atari's is being produced in South America, a source in Venezuela has been reported. Apparently it is no great feat to use an Atari 8-bits computer to drive laser printers. An Atari 850 interface and a straight forward driver using escape codes is all that is necessary to run an Epson Action II. For most work, the XL/XE computers are still quite useable, sometimes preferable. For years Atari Corp has been in a state of slow motion animation. The actions are precise enough but take far too long. Even if Atari peps up, survives, and prospers, it will have to leave all of its older computers behind. Support for the ST will continue to decline, and soon, I expect, ST computers will officially join the other Atari classics.

"BART"

by: Ted Skrecky

In the January/February 1993 issue of XIO3, Gordon Hooper wrote an article about The Victoria Free-Net, a new bulletin board system located right here in Victoria that can access the Internet. When I recently read in an issue of Atari Explorer Online that it is possible to request files from the University of Michigan via the Internet, I decided it would be a good idea to aquire an account on the Free-Net.

The really good news about this BBS is that it costs a total of zero dollars to make use of the Internet because the Free-Net is funded by grants and donations by private citizens, foundations, governments and corporations such as Sun MicroSystems and Telebit Corporation. This means that I can aquire files from the university at no charge. This is a really really great deal! However, there is one catch.

Before I made an attempt to request my first file via the Internet, I had to do a bit of research because, unlike getting files from our club BBS, The Pothole, a fair amount of work is required if you want to aquire a fully functional program from the University of Michigan. Binary files are always first processed into ASCII format before being sent to you through the Internet. Once you receive this mail, you will have to somehow turn the ASCII material back into the original .ARC, .LZH, .ZOO or whatever format. In this article I am going to explain exactly how to do this.

The first thing you need to do is to apply for a permanent account on the Victoria Free-Net BBS. This first task is quite simple. All you have to do is turn on your modem, boot-up your favourite terminal program and change the emulation to VT100 and dial the Free-Net (595-2300). You should have little difficulty in getting on since the Free-Net has 11 modems online.

Once you have properly connected, you will have to enter the word "GUEST" at the first prompt. Next, you will need to enter the Victoria Free-Net Headquarters which you can get into by selecting option #1 from the first menu displayed on your screen. You will then need to do two things. First, apply for an account where you will be asked to enter your name, address and all the other usual information that most bulletin boards require when you logon for the first time. Secondly, you will have to capture to your buffer the online registration form. Once you have exited the BBS, print out the form, sign and date it and mail it to the following address: Victoria Free-Net Association, 203 - 1110 Government St, Victoria, B.C., V8W 1Y2. Once your account has been validated, you will be able to access all the functions available on the Free-Net, including the ability to send and receive mail via the Internet. The real fun now begins.....

In the main menu for the Free-Net BBS you will see option #9 which says "Post Office." Selecting this will get you to (surprise, surprise) another menu. Option #1 of this menu says "Send Mail." Select this and then you will be asked for a valid Internet address. Amazingly, I happen to know the address of the file server for the University of Michigan. It is atari-atari.archive.umich.edu. Type that in and then you will be asked for the subject name. You can type anything you like on this line. I usually type just one character and hit the RETURN key because there is no sense in writing anything longer as the file server will completely ignor the subject name. Bye the way, the University of Michigan server has a name. It is BART. No, Bart Simpson isn't at the other end, patiently waiting to fullfill your every request. BART stands for Brode's Atari Retrieval Thang.

In the main body of the message, there are a number of valid commands that you can enter which BART will recognize. One of them is "help." I highly recommend that, as your first message to BART, you only send this one word as when BART reads it, it will send you a small help file. Type in the word "help" and hit the RETURN key. On the second line type in "####". This will tell the Free-Net's message editor that you have completed writing your message. It will then give you a list of options, one of which is send. Select this and then the BBS will bring you back to the main Post Office menu.

Although Michigan is a fair distance from Victoria, B.C., it doesn't take very long for a reply to arrive. Usually, you should only have to wait for a few minutes. You can spend this time exploring other areas of the Free-Net or just stay in the Post Office area. To check to see if mail has arrived, select Option #3 called "Check Your Mail." If mail has arrived, you can read the message into the buffer by hitting the "t" key. The message will be "typed" onto the screen. Once you have read the entire message, you should hit the "d" key in order to delete it. If you don't do this, the message will stay in your mailbox for the rest of eternity. Oh ya, and don't forget to save the contents of the buffer to disk before you power off your computer.

Before you can request a file, you will first have to aquire a copy of the catalog. Send a message to BART containing the word "index". BART will send back several messages containing a listing of all the Atari 8-bit and ST files and the directories they are in. The reason you will get several messages is because the maximum message size BART can send is 42K. All large files will be split into 42K segments. If BART sends 4 messages, the header of the first message will read "a of ad" and the last message will read "d of ad."

Ok,now you know about 2 commands that BART will recognize. The third and, of course, most important command is "send". When requesting a file, the first word you will want to type is "send," which you can type in upper or lowercase. Leave one space after that word and then type the directory name of the file you want. When typing the directory name, make sure that the first character is uppercase. Next, without leaving a space, enter one forward slash mark "/". Immediately after the slash mark, you will type in the name of the file. Make sure that the entire name, including the first character, is typed in lowercase. Here

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is an example... Say you want to request a file called atax.lzh and this file is in a directory called "Games." You should type the following: send Games/atax.lzh. Here is another example.... if you want an 8bit demo called vblitz.arc, you will have to type in the following: 8bit/Demos/vblitz.arc.

Once you have entered your request in the message editor, you can send your message on its merry way. When you receive your mail, I first recommend clearing your buffer before reading the first message. Once you have finished reading the first message into your buffer, don't forget to hit the "d" key in order to delete it. If there is a second message, containing another part of the requested program, hit the "n" key to read the next message. Keep repeating this process until you have read every message. Once all the "source material" for the requested program is in your buffer, save it to disk. If you are not planning on doing anything else on the Free-Net after you have received your program, make sure you hit the "x" key in order to properly exit the BBS. You will become highly unpopular if you exit the BBS by simply turning off your computer while online!

Ok, you should now have a text file on disk. Not surprisingly, you will not be able to run this file. First, you will have to boot-up your favourite text editor (I use ST Writer Elite) and do a bit of editing. You will need to delete all the message prompts that say "Shown % press ‹SPACE› for more. "q" for quit, or "h" for help" and any other text that has been added to your text file by the Victoria FreeNet BBS. You will also have to delete the message headers that BART attaches to the start of each message it has sent to you. These headers give you the date, address of sender & receiver and the filename. Nuke 'em all. What you should have left is the following:

01) The very first line should say "table."

02) Next, you will have 2 lines, containing the alphabet and a bunch of other characters.

03) Next, 1 line starting with the word "begin" followed by the filename for the first segment.

04) Next, you will see a multitude of lines, each starting with the letter "M". Each line will contain numerous characters.

05) Unless you only received 1 file from BART, the last line in the first segment will say "include," followed by the filename for the next segment. The last letter on this line will be the letter designation of the next segment.

06) Following the word "include" will be a line that says "table," which isthe start of the next segment. Basically, this segment will follow the same format as the first one.

07) Once you have reached the end of the very last segment, you will see the word "end."

If the text in the editor of your word processor is as per the above, you can now save the text back to disk in ASCII format. Make sure you change the filename extender to .UUE. The next thing to do is format an 800K disk and move the .UUE file and a program called Uucoder Version 1.0 to this disk. Uucoder has 2 files as follows: UUCODER.PRG and UUCODER.RSC (This program is available from the GCACE ST library). Run this program and then select "Decode" from the pull-down menu titled "File." This will give you a directory listing of Drive A. Select the .UUE file and then this program will read all the segments, decode, and then write the file back to the same disk in its original .ARC, .LZH, .ZOO or whatever format.

This proceedure for aquiring Atari files from the University of Michigan may sound rather complicated but, once you have tried it, you will find it is actually quite easy. I have requested many files and have had very few problems. One thing you should note, though, is that unless you have a hard drive, or more than 1 meg of memory, you should restrict yourself to requesting files that are under 300K. The reason for this is because Uucoder will automatically write the decoded file back to the same disk that the .UUE file is on. Most drives can only format up to 800K so if you requested a 600K file, you are not going to be able to decode the .UUE file due to the lack of disk space. Of course, this problem could be solved easily by hacking the Uucoder program and making it request that you insert a new, blank disk before it writes the decoded version. Unfortunately, I don't know how to do this! Anyways, if you have any problems with requesting Atari STuff from the University of Michigan, please feel free to phone me (Ted) at 598-6173 or get on the Pothole BBS and post a message to "The CyberLord" (that's me!) in the GCACE message base.

Tesseract
Computer Systems & Software

RICHARD PETERSON

City Centre Plaza
204 - 1483 Douglas Street
Victoria, B.C., Canada V8W 3K4
FAX (604) 386-2515
PH. (604) 382-3475

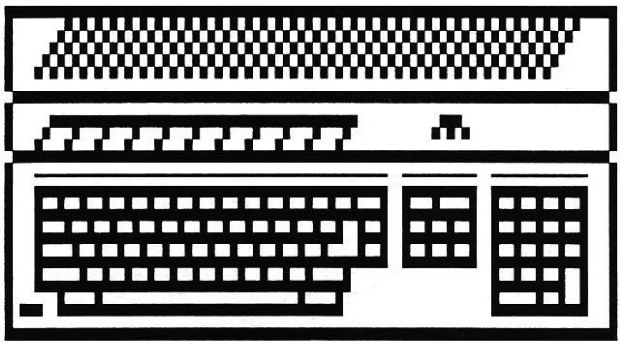
Club Meetings

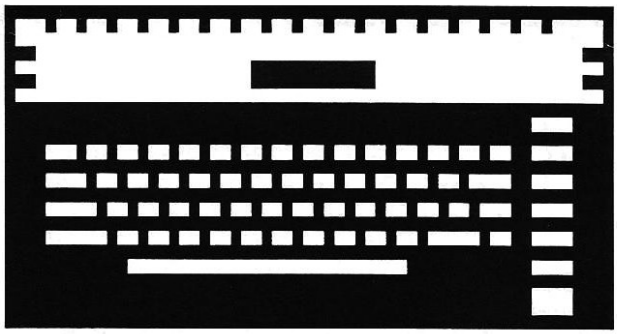
by: Rowland Grant

The May general meeting featured computer graphics. Mark Ericson kindly consented to demonstrate Cyber Studio, the 3-dimensional image constructing system for the ST. Mark showed how you can construct a three-dimensional outline or "wire frame" image. He then filled the image with selections of colour. The drawing environment seems to be very powerful, but fairly easy to use. Cyber Studio comes with disks of general forms to help create architectural or human images. Mark created a number of images using these disks. Very impressive. Cyber Studio was distributed some years back by Antic, however, I am told that it is still available at much reduced prices from various sources. Used copies may be available locally. If you are interested, check with Steve Lemmen. We subscribe to AIM magazine. Unfortunately, AIM seems to have gone out of business, more or less. So the Club has started a subscription to Current Notes. This has useful and interesting articles concerning both XE and ST computers. There are a few back issues of Current Notes in our magazine collection at George Rose's place. New issues will be deposited with George as well. Since George plans to be away on weekends during he summer, you should phone him on week days to arrange to get the periodicals.

The June general meeting was supposed to feature spread sheets and data bases. In trying to arrange for this topic we discovered that data bases can be quite complex. Furthermore, no-one seemed to be willing to tackle the subject on short notice. Fortunately, John Picken said that he had finally removed the bugs from his new 8-bit programs and would be willing to demonstrate his work. John also offered to throw in an 8-bit spread sheet display for good measure. John brought his megaXE (yes, one MEG plus 64K) along for the demonstrations. John's programs consist of a rather flexible RAM disk system, and a virtual computer system. The Ram Disk can be set up on Sparta DOS or MyDOS. John's RAM disk handler is very fast. In operation, the RAM disk can be assigned to drive number one. Then all other drives attached will be renumbered higher. You can then reboot from RAM disk without any fuss, a convenience in many circumstances. The virtual computer system can turn a 130XE into what seems to be two 64K XL's running in the same case. For instance you can run your computer with certain software, and then by a keystroke, copy the impressions of all 62K of the running computer into extra RAM. Then you can warm boot with new software and even a different DOS; this is your second XL. You can then switch back and forth between the two "computers". Each will begin where it left off. John's software was programmed in assembly language, and takes up a minimum of RAM. This software has a lot of customizing features such as cartridge on/off, fast/slow scroll, time-date, and new editing functions. If you have more than 128K, a RAM disk can be set up as well. John will make his software available to members. John says that he intends to publish a description of his work in Atari Classic magazine. How about a condensed version in XIO3 orPSAN John?

John Picken's demonstration was followed by a surprise visit from Craig Carmichael of Esquimalt Digital Logic Inc. Craig had a Falcon030 with him. He ran some of the demonstration programs that came with the Falcon. The visual displays looked very impressive on an old RGB monitor. The digital sound demos were enhanced by a couple of small external speakers that Craig also brought. Craig said that his OMEN operating system will run on the Falcon, except that there is no sound, so its a back to the drawing board. Craig has prepared some demo disks of OMEN which he gave to those members who were interested in trying it. The Falcon demonstration was interrupted from time to time by the sound effects of a new game running on Ted Skrecky's ST. Ted has been downloading new PD games just lately. He has come across a number of good ones. These will be available in the next batch of ST library releases. Thanks to Mark, John, Craig, Ted and all those others (you know who you are) who helped out by bringing their equipment.





8-bit/ST Library Report

by: Ted Skrecky

Although there are no computer stores here in Victoria currently selling Atari ST hardware, there still is one source of commercial Atari ST software. That is Tesseract Software. If you haven't visited Tesseract for awhile, you may want to check out the Atari section sometime soon as they have recently aquired a few new interesting titles. The most highly rated strategy game of all time has been ported over to the ST platform and it can be purchased at Tesseract. The game in question is called Civilisation. Unlike other port-overs such as Ultima VI, alot of work has gone into the ST version of Civilisation to ensure that it isn't a total flop. Civilisation has received many excellent reviews in various British ST mags so if you want a great strategy game, you know where to get it.

Besides Civilisation, there are a number of other noteworthy games which can be purchased at Tesseract. Sleep Walker, a cute platform type game, should be of great interest to owners of STe 1 meg computers as it takes full advantage of the STe's advanced features. This is the first game ever made that will only run on the STe!

Combination packs that combine the original game plus the sequel are being seen more frequently these days. A few copies of the combo pack of Utopia and the New World disks have already been sold at Tesseract and now two new packages have arrived. One of them contains Dungeon Master & Chaos Strikes Back. The main reason I bought an Atari ST computer back on March 3rd, 1988 was because I badly wanted to play Dungeon Master, a wocka wocka wow dungeon exploration game, after having seen it while over at a friend's place. I recently read an article in which the writer asked how many people had bought an ST because of Dungeon Master. It probably is true that Dungeon Master has done more to sell Atari ST computers than any advertising campaigns ever done by Atari Corp! Chaos Strikes Back is the sequel and it too is highly rated. If you have never played Dungeon Master or the sequel, you can now get both for the price of one. The Lemmings/Oh No!, More Lemmings is the other new combo pack. Lemmings is a strategy/platform game in which you must use the many different abilities of the lemmings to get them past various obstacles in order to reach the exit. Both Lemming games have received excellent reviews and are worth buying.

Everybody should already know this but just in case some of our new members are not aware, Tesseract Software does give a 10% discount on all regular priced ST software to Garden City A.C.E. members. It is also worth mentioning that if you can't find what you want in Tesseract's Atari ST section, they can order what you need from their distributor. If you want to see what is available from their distributor, ask to see Richard and he will let you have a look at their catalog of ST software.

Garden City A.C.E. has received a number of magazine donations over the past few months. Thanks to John Towler, we now have a copy of the December 1992/January 1993 issue of Current Notes. Douglas Skrecky has donated copies of the March 1985 issue of Byte, the February 1993 issue of Byte, featuring a review of the new Falcon computer, and the September 1991 issue of Atari Explorer. Also, I have donated the December 1992 issue of Electronic Games, the November 1992 and April 1993 issues of ST Action, the October 1991, November 1991, December 1991, January 1992 and February 1992 issues of The One for ST, the January 1992 issue of The One for Amiga, the January 1992 issue of Cu Amiga, the January 1992 issue of Amiga Power, the March 1992 issue of Amiga Action, the October 1991 issue of Amiga Format and the December 1991, January 1992 and February 1992 issues of ACE magazine to the library. These magazines can be borrowed by club members by contacting and arranging for an appointment to visit George Rose (652-0572), the 8-Bit librarian and the custodian of the 8-bit/ST magazine library.

The big news from the ST library this month is that version 2.9 of the GCACE ST public domain catalog had been completed. I have replaced Disk #96 and have added another 10 disks which brings the library up to Disk #123. A total of 110 lharced files are contained on these 11 disks. There are two ways to aquire the new catalog. You can bring along a blank disk to the next club meeting and I will make a copy for you or you can log-on the Pothole BBS (642-6795) and download a file called GCACE.LZH that is available in the ST Misc. File base.

If you are getting on the Pothole BBS for the very first time, make sure you leave E-Mail to the SysOp (Boomer) and tell him that you are a member of Garden City A.C.E. There are three file areas called GCACE ST, GCACE ST GAMES and GCACE 8-BIT that can only be accessed by club members. This is where the vast majority of new files are being uploaded to. I usually upload most of the new goodies as soon as I have archived them so if you want to check out the latest and greatest STuff long before the updated catalog is completed, you can turn on your modem, load your comms program and dial out to the Pothole. The Pothole BBS is situated out in Sooke but, if you live in Victoria, there are no long distance charges.

Although I use Lharc version 2.01M and Version 3.1 of Charles F Johnson's ARCShell program for data compressing all the new material being added to the library, you can use a much simplier program for uncompressing them. It is called UNLZH and it is available on most of the club disks. However, I have discovered that Version 1.7 of UNLZH has a few nasty bugs. There are a few files in the library which it will not decompress properly even though the .LZH files are not corrupted! However, the good news is that I have Version 1.72 of UNLZH and it works just fine. This version along with the old ST catalog and a few other files were mailed to every club member back in January of this year. Also, to help avoid unnecessary problems, I have replaced the old UNLZH with the new one on every disk in our library.

One of the most frequently asked questions I get from members is about how to decompress .ARC and .LZH files. By far the easiest way to unarchive files that have a .ARC extender is to use a program called ARCX.TTP. Now, since there is little or no room left on the club disks, you will have to format a blank disk and then move the file you want to unarchive along with the ARCX.TTP file to this new disk. Next, double click on ARCX.TTP. It should say "OPEN APPLICATION" and there will be a command line directly below. To extract the files from an ARCed file, for example, called TEST.ARC, all you have to do is type TEST.ARC on the command line and hit the RETURN key. ARCX.TTP will then put all the extracted files in the main directory of your disk. To keep everything

well organized, I suggest creating a folder and then placing the extracted files into it.

Files that have a .LZH extender can be decompressed by using UNLZH172.PRG. First, format a blank disk and then move UNLZH172.PRG and the .LZH file to this disk. When you run UNLZH172.PRG, you will get a menu. This program will automatically put all the extracted files into a folder but if you don't want that to happen, you must select "N" for the CREATE FOLDERS option. Next, click on EXTRACT and you will get a directory listing. Now, double click on the file that you want to decompact. EG: TEST.LZH. You will then get another directory listing with the word DESTINATION in the upper left area of the screen. The program is asking you which drive you want to write the extracted files to. If you have 2 disk drives, you could change the DESTINATION to DRIVE B. However, if you just want to extract the files to the same disk then hit the RETURN key and the files will be extracted from the archive. This program is very easy to use but if you have any problems with it, don't forget to read the documention files!

Before I forget, I should mention that there are a number of new 8-bit disks in the library. Besides the Ol Hacker's disks which arrive once every 2 months, we did receive a few disks of goodies from Ed Hall. Easily the best new game is Mega Blast I in which you are asked to prepare yourself for death! It is an excellent 2 player game which has lots of great sampled sounds and some pretty nifty graphical explosions. As you progress further into the game, new and strange objects will appear. Try shooting them and see what happens. Ed also sent us 2 very fun puzzle games called Gabi and Kradryk.

Also, I have been aquiring a few new 8-bit files with the help of my dear old modem. The University of Michigan has a huge collection of Atari 8-bit and ST files and I can request material from this university via the Victoria Free-Net BBS (595-2300). Right now I am concentrating on scooping-up some nifty demos for the 8-bit. The following is a list of the demos I have received to date:

01) The Veronika Demo. This is a collection of demos from Budapest, Hungary. Besides the usual scrolling text stuff, there is one demo that is most impressive! While the music is playing, you will see the shadow of this gal dancing around your computer monitor. I wonder if the various images of this gal were somehow digitized as the animation is quite excellent.

02) Video Blitz Demo. The title screen for this demo says that a 128K 130XE machine is required. However, this demo does run on my 64K Atari 800XL but I assume I am missing out on something. Video Blitz is an animation demo done in graphics mode 9. Worth checking out, especially if you have a 130XE!

03) World of Wonder Vol. #1 Demo. Although one of the graphic screens is rather scrambled, the demo has some really excellent music which you can select from a menu. When you have finished listening to one tune, hit the BREAK key to go back to the main menu.

04) Your Body, My Body/Moon Shadow/ Universe Demo. There are a total of 3 demos on this disk. By far, the most totally awesome demo has to be Your Body, My Body. It is a completely digitized song which has to be heard to be beleived! Good stuff! Moon Shadow also has a good tune but, unfortunately, the screen is constantly jumping around on my monitor. However, I have discovered that if I hold down on the SELECT button, the screen stops jumping. Rather weird. The last demo is Universe which isn't worth getting too excited about.

If you are interested in aquiring some of these new 8-bit disks, either contact George Rose (652-0572) and arrange for an appointment to come over for a visit or call the Pothole BBS (642-6795) and download whatever you want.

Well, thats all I have to report on for this issue of XIO3. Don't forget that the ST library is open for disk copying at every meeting. All you have to do is bring along some blank disks and we will fill them up for you!

The Computer Dictionary

by: Gordon F. Hooper

Computer - The machine which brought on all your troubles.
Disk Drive - The machine you want to throw out the window of a 25 story building when it doesn't cooperate.
Diskette - A magnetic storage device which is useful as a coaster if you bend it, touch it or expose it to magnetic fields, liquids or heat.
Hard Drive - A device for mass storage, useful for BBS sysops and other masochists.
Monitor - A crude television set which doesn't even have mindless sitcoms or gratuitous sex like network TV.
Printer - A contraption which cause many days of toil before you can force it to work whith your computer.
Printer Ribbon - A gadget which always breaks at 4 am of the day your 100 page thesis is due.
Laser Printer - A machine which costs enough to cause your spouse to nag you for the rest of your married life.
RAMdisk - A wonderful device which allows you to lose hours of work simply by flicking one switch.
Joystick - An input device used to entertain people who should find something useful to do with their lives.
Docs - Instructions for software programs that are written by individuals who have no idea how to communicate with normal people.
Modem - A device to connect your computer to phone lines that results in bills of magnificent proportions each and every month.
Files - Work which has been written to disk using 8 letters as a filename which are incomprehensible when the time comes (and it will) to dechipher them.
Swear Words - Language required before your computer system will perform properly.
Lockups - God's revenge for taking His name in vain.
MS DOS - God's revenge on people who don't buy Atari computers.

Basic and all that (part 2)

by: Rowland Grant

In this part I will review the implementation of the BASIC language on Atari 8-bit computers. But first, some more background. Over the years since 1964, BASIC developed into a fairly large and sophisticated computer language. However, the early microcomputers could not handle more than 64K of memory directly. Moreover, RAM micro-chips were so expensive that few computer owners could afford even that much. So the full BASIC had to be pared down and modified to fit into a typical microcomputer's memory.

Early microcomputers sold for general use were manufactured mainly by Radio Shack (TRS80), Apple and Commodore (PET). Each of these vendors had BASIC built into the computers. They all used the Microsoft version of BASIC. However each brand of computer had special hardware features. So Microsoft BASIC had to be modified considerably, making a somewhat unique BASIC in each case. Other brands of microcomputers were designed for business use. They were quite expensive, used the CPM operating system, and often used versions of BASIC that differed considerably from those based on the Microsoft model. And it happened that one software developer of BASIC for CPM computers was contacted by Atari.

TABLE 1

Time in seconds to run one pass of the Sieve of Eratosthanes

Atari BASIC	318
(with FASTCHIP)	256
BASIC A+	241
BASIC XE	138
TurboBASIC	125
Microsoft BASIC	117
BASIC XE (fast)	112
TurboBASIC comp	32
Advan BASIC	22

In 1978 Atari got ready to move into microcomputers. Like the other manufacturers, Atari purchased rights to use Microsoft BASIC. Unfortunately the programmers at Atari couldn't fit Microsoft BASIC into the 8K of memory space available. Also they wanted to expand the language to handle the unique graphics, colour and sound capabilities of their new Atari 800 computer. So Atari asked Shepardson Microsystems, to try to adapt Microsoft BASIC to the new computer. The people at Shepardson didn't think that it could be done, however they agreed to develop a different version BASIC for the new computer. In a remarkably short time, Atari BASIC was finished and put into ROM cartridges. So when the Atari 800 computer made its debut at the 1979 CES show, Atari BASIC was available to go with it.

The programming environment provided by Atari Basic was simple and flexible. A program could be written, listed and executed using the same screen editor. Not all computing environments are as convenient. Atari BASIC differed from Microsoft BASIC mainly in the way strings of characters (text) are handled. In Microsoft BASIC strings were limited to a length of 256 bytes, whereas Atari BASIC could have a string length up to 32K bytes. The designers of Atari BASIC gave extra attention to string handling. This is very fast and efficient. On the other hand, number crunching is slower using Atari BASIC than with most of its rivals. The trouble here is not in the BASIC itself but in the floating point math routines in the computer's ROM. Hardware add-ons, such as FASTCHIP can fix this. While most versions of BASIC can access machine code, Atari BASIC has a USR command that can also pass parameters tomachine language subroutines. Thus, Atari BASIC (with a few machine code calls) can completely control the Atari 8-bit computer for most purposes.

Atari BASIC (version A) was released before the authors had finished checking for bugs. There were a few, but most of the bugs were minor and could be avoided. However there was one serious bug that seemed to strike at random. During a programming session where lines of code were being erased, the computer might suddenly stop responding to the keyboard. If the reset key didn't fix things, one had to reboot the computer thereby losing the work. This bug was in the code that moved strings downward in memory. It could be triggered when exactly 256 bytes were erased.

Atari eventually removed the bugs and issued Atari BASIC version B. When the 800XL computers were introduced, Atari decided to build BASIC,(version B) into the computer rather than supplying BASIC in a removable cartridge. Unfortunately The programmers at Atari introduced a bug of their own. This bug tended to add a string of sixteen bytes onto the end of a program every time it was saved to disk. The bug could do other nasty things a well. Atari waited until it had used up its store of BASIC ROM chips before introducing the finally debugged version C. A few XL computers have the corrected BASIC. Of course all of the XE line contain Atari BASIC version C. If you have an XL computer, boot with BASIC and type: PRINT PEEK(43234). If the value returned is 96, you have version B, if it's 234, you have version C.

Many additions and modifications to Atari BASIC were produced. Usually they added DOS and debugging commands to the BASIC programming environment. One of these, called "Enhancements to BASIC" corrected the bugs in Atari BASIC as well. Since interpreted Atari BASIC tends to be slow for some purposes, various compilers came on the market. One by Monarch limited the BASIC code to integers only, and compiled to a tokenized code that only doubled the speed. Two other vendors, Datasoft and MMG offered compilers that produced faster machine code, but the resulting programs were often very bulky.

Shepardson Microsystems was re-organized and became Optimized Systems Software, or OSS. The copyright to Atari BASIC remained with OSS, so it continued to develop Atari BASIC. OSS created a expanded, bug-free version of Atari BASIC called BASIC A+. OSS offered BASIC A+ to Atari. However, Atari was planning to release a version of Microsoft BASIC so it turned down the offer. BASIC A+ takes

more than 16K of RAM, and was made available only on disk. However, the Atari 800 cartridge port can allow one to switch to different banks of memory in the cartridge. By this means, OSS managed put 16K of BASIC into a cartridge which took up only 8K of memory. This new version was called BASIC XL. It had all the improvements of BASIC A+ and more. Also BASIC XL incorporated an ingenious method for making BASIC programs run faster. When the 130 XE computer was released, OSS created BASIC XE. This is a revised version of BASIC XL with the added ability of using mostof the 128K of RAM in the XE for BASIC programming. While these new BASIC interpreters from OSS are fairly complete versions of BASIC, they all will run standard Atari BASIC code.

Frank Ostrowski in Germany became dissatisfied with Atari BASIC and created a few enhancements for it. Later, after more experimentation with his Atari 400, Frank decided to modify Atari BASIC itself. The modifications eventually became so numerous that Frank found that he had created a new version of BASIC. It was still compatible with Atari BASIC but rivalled BASIC XL in sophistication and speed. He called it TurboBASIC XL. Frank also studied FORTH, another computing language. This experience led to the creation of a very efficient compiler for TurboBASIC. Frank released TurboBASIC and its compiler to public domain. It was also published in a German magazine called Happy Computing. Frank Ostrowski went on to greater glories as the author of GFA BASIC, but that is another story.

All the versions of BASIC discussed so far are compatible with Atari BASIC. There are at least two more that are not. They are Advan BASIC and Atari Microsoft BASIC. Atari Microsoft BASIC is not as complete as BASICA on the PC, but it has most of the better features. It has a greater speed and accuracy in handling decimal numbers than Atari BASIC or any of the other interpreters. Atari Microsoft BASIC was first released on disk, but a second version was sold in a 16K cartridge (not bank switched), The cartridge version also needed a disk of supplementary commands.

Advan BASIC compiles its code directly into machine language. The syntax of Advan BASIC has some similarities to the Microsoft model but with a large number of Atari specific commands. Advan BASIC also allows mixing assembly language with BASIC code. This feature is rare among BASICs. Advan BASIC uses its own DOS. It does not create stand-alone compiled programs. The compiled code has to be on a disk containing Advan DOS and the Advan execute module. The main advantage of this BASIC is that programs using it will run very fast.

One of the tests for the efficiency of a programming language is the speed with which it will run a standard task. One standard is the time taken to sort the prime numbers in 8190 using an algorithm called the "sieve of Eratosthanes". The values given in Table 1, are the number of seconds taken by each BASIC to run one pass of the "sieve" program. An example of this "sieve" program that can be run by Atari BASIC and compatibles is given in the Program Listing. One can see that the Atari BASIC interpreter is the least efficient number cruncher and that the BASIC XE interpreter in fast mode is the best. When BASIC is compiled the speed of the "sieve" is increased by a factor of 10 to 15 over Atari BASIC.

As far as I know, only three or four versions of BASIC for Atari 8-bit computers are still available. Atari BASIC (version C) in cartridge form and Atari Microsoft BASIC II can still be boughtfrom suppliers such as Best Electronics. But the finest all-round BASIC for Atari XL/XE computers is TurboBASIC. It's fast, it has a command set that lends itself to structured programming and it can be compiled for even greater speed. Most of all, TurboBASIC is free, and is well supported by the Atari 8-bit community. There is a fourth BASIC, CTH FastBASIC, that I haven't seen as yet. CTH FastBASIC is marketed as shareware. It is compatible with Atari BASIC, and I understand that it has been designed for fast, accurate number crunching.

Most public domain software for the 8-bit Atari computers has been programmed using Atari BASIC (or compatibles). There's still lots of new Atari 8-bit software turning up on bulletin boards and in club libraries. The Atari 800 series and Atari BASIC started out together and are remaining together.

PROGRAM LISTING

```
10 REM Speed test for Atari BASIC
20 REM Sieve of Eratosthanes
30 REM Remove all "REM" lines before
running
40 REM Handle the numbers in a string
45 REM or integer array (Microsoft)
50 SIZE = 8191 : DIM FLAG$(SIZE)
60 REM Set timer to zero
70 POKE 18,0 : POKE 19,0 : POKE 20,0 :
SEC = 0
80 REM Fill string with ones
90 FLAG$ = "1" : FLAG$(8191) = FLAG$
100 FLAG$(2) = FLAG$ : PRINT "
WORKING"
110 REM The Sieve program
120 FOR I = 1 TO SIZE.
130 IF FLAG$(I,I) = "0" THEN 210
140 PRIME = I + I + 3
150 J = I + PRIME
160 IF J > SIZE THEN 200
170 FLAG$(J,J) = "0"
180 J = J + PRIME
190 GOTO 160
200 COUNT = COUNT + 1
210 NEXT I
220 REM The timer routine
230 T3 = PEEK(20) : T2 = PEEK(19) : T1 =
PEEK(18)
240 SEC = INT((4.25 * 256 * T1) + (4.25 * T2)
+ T3/60))
250 PRINT "TIME TAKEN "; SEC ; "
SECONDS"
260 PRINT " TO SORT "; COUNT ; "
PRIMES"
270 END
```

FOR SALE

Steven Lemmen 595-7811

Hardware For Sale

Atari 520 ST, 2 megs of memory, no drive, uses external, TOS 1.0, $200
Atari 1040 STFM, 1 meg of memory, internal DSDD drive,TOS 1.0, RF modulator and mouse, all you need to get started, $200
Atari 1040 STF, 2.5 meg memory, TOS 1.4, double sided drive, $350
Atari 1040 STF, 4 meg memory, TOS 1.4, double sided drive, $450
Atari Mega STE,4 meg,16Mhz, clock, 50 Meg internal hard drive,TOS 2.05 detachable keyboard, 3 serial, stereo, MIDI, RF, LAN, $750
HP DeskJet printer,300 dpi B&W inkjet, 240 cps, $600 new, 1 year old, $390
OmniMon multisync monitor, 13", use as mono or colour, with switch,$300
StarSync multisync monitor switcher, colour, mono, audio/video jacks $90
Atari ST SC1224 colour monitor, low and medium resolution, $225
Atari ST SM125 monochrome monitor, high resolution, $150
Atari ST external DSDD disk drive, power light, floppy flipper, $125
Atari SX 212 1200 baud modem, ST or 8 bit, $30
Spectre GCR, Macintosh emulation cartridge, with ROMs, Ver 3.0, $250
Brother SF-40 cut sheet feeder for Brother M-1509 printer, $25
Star NX-1000 Multi Font 9 pin dot matrix printer, $135
Colour TV, 19" RCA Colortrak, great for 8 bit machines, $65
Atari 1020 printer/plotter for 8 bit, 4 colour pens, $20
Mouse Master, joystick/mouse extension/switch box, $25
Dual paddle set for 8 bit machines $10
Hytex, Japanese NES, 110 game cartridges and Mario Bros 3, $185
ICD AdSpeed ST, 8/16 Mhz accelerator, 32K cache, $150, or $175 installed
Swivel Monitor Base,$10
Plexiglass computer/monitor stand, straddles ST, $10
Monitor Master, Practical Solutions colour/mono monitor switch box, $25

Steve has a lot more hardware and software than listed here, so if you are looking for some HW or SW, give Steve a call and he will send you out a complete list!! He also does repairs, upgrades, etc.

Atari ST Software
(original disks with manual)

1st Word, wordprocessing software, $10
Action Fighter, excellent spyhunter style car driving arcade game, $15
Airball Construction kit and game, arcade maze game, $10
Arcade Pack 1, Xenon, Blastaball, Sidewinder, $20
Armour-Geddon, strategy arcade war game, modemable, $20
Austerlitz, Napoleon strategy board wargame, $15
Autoduel, adventure game, $10
Baal, graphic shoot-em up game, $15
BB/ST bulletin board system, $10
Black Lamp, arcade adventure game, $10
Blood Money, excellent shoot-em up, 1 or 2 player simultaneous, $15
BSS Jane Seymour, D&D style, Sci Fi arcade adventure game, $20
CAD-3D Ver2.0, Cyber Mate, Cyber Control, 3D drawing/animation, $25
Captain Blood, space strategy game, $10
Captive, excellent sci fi theme D&D role playing action game, $20
Carrier Command, strategy arcade style wargame, $15
Chrono Quest, graphic mystery adventure game, $15
Codename Iceman, Sierra role playing submarine terrorist game, $20
CRICIT, cash register and inventory control, $20

Atari 8 bit Software
(original disks with manual)

Field of Fire, wargame, $10
Gulf Strike, wargame, $10
Theater Europe, wargame, $10

Books For Sale

Analog Compendium, 189 pages, $10
Best of Antic Anthology, 298 pages, $10
The Atari ST Book, Vol 1, Ralph Turner, 159 pages, $10
6502 Assembly language programming, Lance Leventhal, $10
2nd Book of Machine Language, Compute book, 446 pages, $10
Mapping the Atari, Compute book, 194 pages, $10
Adventures with the Atari, Basic computer adventures, 356 pages, $5
Compute's 1st Book of Atari Games, 230 pages, $5

Upgrades and Repairs
(minimum charge $25)

1 meg memory upgrade to 520 STFM, type with internal drive, $125
2 meg memory upgrade to 520 ST, type with external drive, $250
2.5 meg memory upgrade to 520 or 1040 ST with internal drive, $250
4 meg memory upgrade to 520 or 1040 ST with internal drive, $450
4 meg memory upgrade to 1040 STE, type using SIMMs, $250
4 meg memory upgrade to Mega 2, $250
Dual TOS 1.0 and 1.4, toggle switch, maintain compatibility, not STEs,$125
TOS 1.4 upgrade installed, $90
ST mouse repair, most problems are cable or buttons, $25
Floppy flipper for disk drive, write to back of disks, $25
Upgrade single sided disk drive to double sided, $110
Hard drive expansions, expand by adding internal mechanisms, $call$
Repairs to Atari ST and 8 bit equipment, reasonable, negotiable, $25 min
Custom Atari upgrades and modifications, reasonable, negotiable, $25 min
Want To Buy - Used Atari 8 bit or ST software or hardware, or trades.